The Influence of Gender on Decision-Making

Research Thesis

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by

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Abstract

Making the right decision is a very hard thing to do in certain circumstances. Today though this is very tough thing to do because people are always being influenced by the world around them. This thesis sets out to understand how sex shapes such influence patterns – both an individual's sex, and the sex of influential others. To do so, I conducted a survey experiment. Participants gave their opinions on a series of questions, and then there were experimental questions that randomly tested the participants ability to make individual decisions when faced with a gendered manipulation. Changing opinions is here conceived of as social influence. An analysis of the data revealed that there is connection between gendered influence and changing your decisions or beliefs, but because of a small sample size the statistical power of these findings is low.

Introduction

The ability to make your own decisions and follow your own path is an important part of any human being, but sadly there are many factors that make this a nearly impossible task. People today are influenced by the media, their family, their friends, and even strangers. All these influences have made it much more difficult for individuals to make their own decisions. The inability to be independent and make your own decisions can be a very dangerous thing and makes people more vulnerable to suggestion and peer pressure. To a lesser extent this could lead youths to participating in drug use to fit in or to the extreme it could lead adolescent youths to joining dangerous groups like gangs or terrorist organizations.

This study will focus on undergraduate students attending The Ohio State University and their ability to make independent decisions. Studies on decision-making tend to focus on the ability of individuals to make their own decision under the pressure of a group circumstance in which the group makes the wrong decision. This study will not only look at this but will further expand on this idea by specifically looking at the role that gender has in decision-making. This characteristic has historically held social weight. No matter the era people have always attempted to fit in with people like them but at the same time there are other wrinkles that make the relationship more complicated. In the past what men said were laws and women had to follow them and even now women are constantly having to fight for their rights. These socially constructed ideas are what this study will specifically look at, to see whether these ideas remain true. The reason this is an important issue to study is because every day there are people joining dangerous groups and making poor and dangerous decisions based upon their inability to make their own decisions. The people that are characterized to be most vulnerable to these groups are adolescent youths. To prevent the youths of today from joining these groups law enforcement

bodies, parents, and other groups need to understand the reasons that they follow those groups. Once this is accomplished preventive measures can be put in place that will be geared toward reducing opportunities of group dependence and emphasize the need for independent thought.

Specifically, I hypothesize that men will be more likely to be influenced by other men. To study this topic and answer my research question I conducted a survey experiment. The experiment asked participants their opinions on a variety of items, had them complete filler tasks, and then asked for their opinions again. Before recording their final opinions, participants were presented with feedback about the sex and opinions of others. Results show some support for the contention that sex shapes patterns of social influence, but statistical power is a cause for concern.

Literature Review

This paper will examine the impact that different gendered groups have on a person when deciding. I hypothesize that people presented with gender manipulation are more likely to change their behaviors to align with the group that is most like them. Data from past studies have produced evidence that the gender of a group can lead a person to make different decisions then they normally would. Solomon Asch (1956) was one such researcher and through numerous experiments he worked to determine the influence that the group has on an individual. This study was "concerned with the conditions of independence in the face of group pressure" (Asch 1956). In the experiment, Asch, tested one person by asking them questions and presenting them with choices but before asking for an answer he would ask the other people in the room to make their choice. These people were confederates and would make the wrong choice and, in the end, Asch found that even though they made the wrong choice the subject of the experiment would still follow the group. One shortcoming of this research is that it does not gauge what the subject's

responses would have been without the group pressure. Meaning that Asch did not ask the subjects prior to the experiment the same questions that he would ask during in order gauge if a change occurred. As a result, my experiment will expand upon Asch's by comparing the answers that the subjects give prior to group interaction and then determining if the group causes them to change their prior answer. My experiment will then not only measure the strength of group pressure but also how it can change a person. This experiment by Asch does support my hypothesis and even informed the ideas leading to the construction of my experiment. It supports my hypothesis that a group of people can affect the way an individual reacts in situations.

James Balkwell and Joseph Berger (1996) investigated and expanded upon the idea that gender of one person can influence the judgements or opinions of another person. The results of their experiment found three essential results: "(1) males exhibit more status/power activity than females in ostensibly neutral task situations; (2) the same qualitative difference is found in male-typed task situations, but the difference is larger; and (3) a female-typed task reverses the gender difference, but the effects are smaller than the analogous effects of a male-typed task" (Balkwell and Berger 1996). Basically, these results show that in non-gendered tasks males have the power to influence the judgements and opinions of those around them because they are viewed as having a higher status. The next two results look at this same phenomenon in relation to gender-specific tasks and found that while the impact of the gender varies, the male gender has more sway than the female gender. This is an important study to look at for my research because it directly shows the influential power that a gender has. Applying these finding to my research I could potentially conclude that in my experiment the group of all men will have the power to sway people from their original decisions. This is how my experiment will expand upon this study because the results of my experiment will show that gender does not only affects who is

the leader in a specific task but also that the gender of an individual can affect the way that a person views their own opinions and beliefs.

Lisa Rashotte and Murray Webster (2005) identify potential causes for gender-based influences. The two specifically look at the idea of status beliefs (Ridgeway 1997), which they explain to be the root cause of gender inequality and that these inequalities are most likely subconscious and thus will unknowingly influence the way we look at and perceive other people. Their findings support previous arguments and experiments and find that men and women have been placed, subconsciously, into specific roles that are very hard to overcome such as women being better at changing diapers and men being able to better change a tire, which they state in their findings when they found that "both men and women respondents, on average, reflected cultural stereotypes on changing babies and tires" (Rashotte & Webster, 2005, p. 629). These findings relate to my research because in my study I wish to investigate how gender specific groups can influence, shape, or change people previously held opinion or decisions. One of the things that could cause this to occur is the idea of status beliefs. The shortcoming of this experiment was that it only looked at how a person looked at other people instead of how these beliefs affect the person who has them. Having these beliefs could dramatically affect your outlook on the world and the people within. Thus, my research will expand upon theirs by showing that not only does gender influence the way people see each other but that people themselves can change due to the gender of the people around them. These findings support my hypothesis as well as give my research important sociological backing because there is now a term that can be used to explain why such behavior occurs and why it can affect so many people.

Cathryn Johnson, Jody Clay-Warner, and Stephanie Funk (1996) performed an experiment "comparing members' behaviors in all-male and all-female groups in a male-dominated

coeducational college and all-female groups in a female-dominated women's college" (Johnson, Clay-Warner, Funk 1996). This is a way in which my research will differ from and expand upon this experiment because my experiment will not look at single gendered groups but groups that are a mix of males and females. Johnson, Clay-Warner, and Funk found that "women have higher rates of agreements than men, and men have higher rates of counterargument" (Johnson, Clay-Warner, Funk 1996). These findings are very important when applied to my current research because it could explain why women would be more willing to change their original opinions/decisions because they are being agreeable. To eliminate this phenomenon as a confounding variable in my research my confederates will not be making any arguments on the topic and there will also be an equal number on both sides. By performing these measures this phenomenon will be reduced because there are no right or wrong answers, instead the participants will have to choose between being conformists or sticking with their beliefs. My research will expand upon the findings of this study because, as previously stated, it will see if different gendered groups can influence an individual instead of focusing on same-sex groups.

Ridgeway (2009) argued "that gender is a primary cultural frame for coordinating behavior and organizing social relations." The essential feature of this research is that it attempts to show how gender shapes the way people interact. These frames helped to establish some of the longest held beliefs that have shaped the way individuals look at the males and females. For example, this idea explains why "women are typically sanctioned for acting too domineering and men for being too yielding or emotionally weak" (Ridgeway 2009). They put people into specific categories within society which has allowed one group to be considered more dominant than the other. The idea of gender as a cultural frame relates to my research because of how it shapes the way people approach making choices. For my research I will have people of specific genders

make a choice and try to see if I can influence their choice by having other people of different genders make a different choice. Thus, Ridgeway's work provides important background information that helps to inform my hypothesis.

Joseph Dippong (2015) investigated how the priming of males or females affected their expectations of women. The method of the experiment was broken into two phases. In phase one participants completed a photograph rating task, which was used to disguise the true motive of priming participants with a stimulus for phase two. The pictures shown to the participants were either low status or high-status women. "Low status primes depicted women engaged in gender-stereotypical behaviors, such as housework or low wage domestic labor. Women in high status images were dressed in attire suggesting professional status and inhabiting stereotypically high-paying jobs that require high levels of education. Each photograph depicted only one person" (Dippong 2015). After being shown the image for five seconds they were asked to rate the woman in the photo. Following this the participants were instructed to begin work on a second study. The second study was to see if a partner could influence the decision making of the participant. The results for men were negligible but when applied to females the results were much different. The experiment shows "that priming females with high status female exemplars can reduce the degree of status inequality in mixed-sex groups. At the same time, results pertaining to priming females with low status female exemplars suggest a possible mechanism by which disadvantaging gender beliefs activated outside the group setting are imported into group interactions" (Dippong 2015). The major shortcoming of his research was that men were unaffected by the priming from phase one thus men were shown to be unaffected by the outside pressure in phase two. Therefore, in my experiment I will eliminate priming but instead just perform a version of phase two and measure the true influence of another on a group. Dippong's

research shares many similarities with my research, the biggest difference comes from what we were investigating. While he investigated the effects of inequality and priming I am looking at the effects of a group on an individual. This is how I plan to expand upon his research by showing that even without prior priming a group of people can influence an individual's response. My research will also expand upon Dippong's by possibly indicating that men can have a greater impact on a woman's choice than women do and vice versa.

Seibert, Fossett, and Baunach (1997) analyzed status inequality trends between men and women in occupational settings. Their study found that between the 1940s and 1970s there was a fluctuation in levels of inequality, but it was still present. Along with this information they found that even though segregation decreased as well as inequality they did not decrease at an equal rate with segregation decreasing at slower frequency. These findings influence my experiment because this could explain how people think when they look at different gendered groups. If a person is male and views women as less because he works with women who make less them him or is just prejudiced, he will be more likely to change his beliefs to align with males just to keep the status quo. The same is true for women who may feel less than men because of their work life and as a result they may side with the women who they see as equals while the males are the superior, and at the same time they could agree with the men because they want to subconsciously please the people they view as better. This study supports my hypothesis because it says that there is difference between men and women and this difference whether it be inequality or segregation influences the way people act and how they make choices.

Walker, Ilardi, McmMahon, and Fennell (1996) examined the relationship between gender, interaction, and leadership in task groups. They departed "from standard analyses and use a measure of opinion change to describe leadership in a power and prestige order" (Walker, Ilardi,

McmMahon, and Fennell in 1996). One of their objectives is to identify whether males exercise more influence than females in face-to-face groups such as families and juries. They found that, on average, female leaders were more disliked than the male leaders. They also found that when women were leaders in sex-differentiated groups they were evaluated less consistently. This study both supports and disproves my hypothesis. It disproves it because it did not find that men are perceived as better leaders than women or that people would follow either leader any differently. On the other hand, it supports my hypothesis by showing that in differentiated gender groups, females were evaluated much differently. I suspect this could be due to biases and jealousy that the participants already had. This possible explanation is critical for my experiment because in my experiment the subject's decision will be influenced only by the appearance of the two groups in front of them, which means they can only be influenced by their own perceptions of different gendered groups. As a result, my experiment will expand upon this study by not allowing participants to interact but by testing only their first impressions and inclinations based upon their lives and the world around them.

Baunach (2002) is another study that looks at trends in occupational sex segregation and inequality. This study found that as time progressed levels of segregation and inequality toward women decreased but at the same time men and women still find themselves in different occupations. Once again, this study both supports and opposes my hypothesis. It opposes it because it says that there is less segregation and inequality which means people may not be biased or influenced by different gendered groups. Though this experiment can support my hypothesis because even though the amount of female or male specific jobs have decreased Baunach's research does show that there is a presumption of a job as solely feminine still exists and in some cases still payless. This finding means that the bias is not completely gone, and that

people are still influenced by prejudiced gender thinking which can affect the results of my experiment. If a person still believes that there are male and female specific jobs they are more likely to side with their own gendered group or they are subservient more likely to follow the group presumed to have more power.

Meeker and Weitzel-O'Neill (1997) evaluated the validity of the sex role differentiation hypothesis. Their research suggests that sex roles may be the result of status processes. They start off with the assumption that since men are presumed to have higher status than women, men are thus expected to be more competent than women and are expected to have more competitive or dominating behavior. This supports my hypothesis because it shows that the different genders have different levels of influence on a person. Based off the information in this study it could be concluded that men are more influential which can be apply to my study by saying that the group of men will be able to more often influence the decision making of the subject than the female group.

Cecilia Ridgeway (2006) looked at gender as an organizing force in social relations and how it can influence future levels of gender inequality. Her argument is that while society has come a long way it still has a lot more to do to eliminate gender inequality and its effects on people. The idea that gender inequality still exists greatly impacts my study because even a miniscule amount of inequality can influence the thinking of an individual. Whether they want to fit in with the group they view as powerful or if they want to be sympathetic to the group that is weaker. In either of these cases they are not making a decision they agree with but one that makes them look and feel better. My experiment will expand upon this by seeing if the idea that a subject can be influenced by two different gendered groups. If they change their original choice to another

option, then they were influenced by the gender group but if they stay their original opinion then they are not influenced by the groups.

Patricia Devine (1989) performed three studies to evaluate the relationship between prejudice and stereotypes. This relationship was tested to determine whether people of high and low prejudice are knowledgeable of cultural stereotypes. "Study 1 suggested both high- and low-prejudice persons possess, and personal beliefs about the stereotyped group. Study 2 suggested that automatic stereotype activation is equally strong and equally inescapable for high- and low-prejudice subjects" (Devine 1989). In contrast to the previous studies, "study 3, provided evidence that controlled processes can inhibit the effects of automatic processing when the implications of such processing compete with goals to establish or maintain a nonprejudiced identity" (Devine 1989). This relates to my study because it shows how preexisting notions of gender could potentially affect a person. For example, if a man has prejudice that says men are more competent, then a man is less likely to listen to a woman. By utilizing the ideas of this study, I will be able to further expand on its findings and add to the current literature relating to the topic.

John Bargh, Mark Chen, and Lara Burrows (1996) analyze the relationship between the environment/trait construction and the activation of stereotypes. Bargh, Chen, and Burrows evaluated this relationship through three experiments. The first experiment looked at the behavioral consequences of priming participants to specific traits. The subsequent experiments focused more specifically on priming participants to either age or race. The overall message of this entire experiment was "that social behavior can be triggered automatically by features of the environment" (Bargh, Chen, Burrows 1996). In the end, these three researchers found "first, the apparent degree to which social behavior occurs unintentionally and without conscious

involvement in the production of that behavior. Second, the findings point to the possibility that the automatic activation of one's stereotypes of social groups, by the mere presence of group features (e.g., African American faces in Experiment 3), can cause one to behave in line with that stereotype without realizing it" (Bargh, Chen, Burrows 1996). This once again shows that people can be influenced by prior conditioning. My research will expand upon these findings by looking at the effects of gender, which was not explored in this study. Thus, by including gender as the central focus of my research question I will build upon this already well-established base and further develop the relationship between traits and stereotypes, while at the same time determining if gender can change a person's beliefs leading them to either conform or submit to the will of others.

Once again, the question this research study will attempt to answer is: Are people subconsciously more likely to align their beliefs with people who are more like them, as in the same gender, which in turn will cause them either abandon their previously held beliefs or to change their outlook on the world? This abstract question may shed light on whether people are more likely to join gangs or terrorist groups because, on average, the individual person in more likely to conform to groups of people that are more like them as opposed to groups of people different then they are? I hypothesize that if a person who does not have too strongly held beliefs they are more likely to change those beliefs to the contrary belief based upon the gender of the group with the opposing belief. This research will attempt to add to the existing literature by examining a person's initial belief and then comparing that initial belief to their belief after they are exposed to a group environment and analyzing the changes.

Methods

Sampling and Survey Method

I used a non-probability sampling method. This not only means that my sample population was not randomly chosen but it also means that everyone does not have an equal chance of being selected to participate in the study. The specific type of non-probability sample that I utilized for my survey was a convenience sample. I constructed my survey in Qualtrics. This website allowed me to create anonymous links for respondents to click on to answer my survey. Once these links were created I compiled a list of potential subjects with my mentor. We gathered over 300 names of people that attend the Ohio State University. From this convenience sample of Ohio State students, I received responses from 61 participants, 21 of which were men and another 38 that were women. A major fault of this type of sampling is that the sample of respondents gathered does not accurately represent the broader population. For example, most universities like the Ohio State University have more girls attending the university as opposed to men but my study will seek to account for this by bringing in a roughly equal number of men and women. The experimental design I utilized for my research was a 2 x 2 design that manipulated the sex of the influencing group and blocked on participant sex. The major benefit to this approach that it was cost efficient for both actual money and time spent. Using this design also made it easy to collect the minimum desired responses of 61 because many of the participants could not only work on the survey simultaneously but they were also able to do it at a fast pace.

A survey method is a very efficient and accurate way to collect numerous people's behaviors and attitudes because a survey can ask them questions about both behaviors and attitudes. There are drawbacks to this method though because there is no way for the researcher to know if the respondents answering the questions are lying, exaggerating, unable to remember, or are unable to quantify their actual behavior. Another issue is that some of these questions will deal with sensitive issues that some of the respondents may not be willing to discuss face-to-face

causing them to either not answer the question or answer it in a way that is not truthful. Utilizing a survey method to gather data from the first and third part of my experiment was a very good way to get quick data with little outside influence. Therefore, I went with a survey to eliminate outside influence and gauge the subject's unfiltered reactions to these questions.

Experimental Design

The survey was broken into two halves. The first half of the survey asked the initial set of baseline questions without gendered influence. The survey then asked demographic questions and filler questions. The purpose behind the demographic and filler questions was to gather information about my subject pool, and, more importantly, to add time between the pre- and post-test measurements. The reason I want to add time to the survey is so that respondents are further apart from the first half of the survey thus have less memory of their original answer allowing the questions in the second half to fully affect them.

Upon completion of the first half of the survey the Qualtrics system randomly assigned the participants to determine which of the second halves of the survey they completed. One treatment had women taking a stance on the issues and the other treatment had men taking a stance on the issues. Before reporting their opinions for a second time, participants were told that a high percentage of OSU female or males (depending on conditions) held particular opinions on the issue at hand. For example, participants assigned to the female manipulation were told that 86% of OSU women think the egg came before the chicken. After receiving the manipulation, participants were asked their opinions a second time. Each of the percentages used was a strong majority but none of the numbers are real results from other surveys. The first question has 78% of either males or females, depending on condition, being in favor of or for the death penalty. The answer choices for this question are on a sliding scale from for (0) to against (10). The

second question has 86% of either males or females believing that the egg came before the chicken. Like the previous question the answer choices will be on a sliding scale with chicken (0) and egg (10). The third question will have 84% of either males or females being pro-life. Like the previous question the answer choices will be on a sliding scale with pro-life (0) and pro-choice (10). The fourth and final question has 72% of either males or females possessing a positive view of our current United States President. Like the previous question the answer choices will be on a sliding scale with negative (0) and positive (10).

Participants were presented with consistent gendered feedback. For example, for one survey option every question will have a percentage of females and the other will have a percentage of men with no crossover between them. This is done in the hope of alleviating the impact of any potential lurking or confounding variables that could occur.

Upon completion of the final question, there was a short conclusion thanking the participants for their participation in this survey. Also present in this conclusion was directions for how the participants could collect the reward for completion.

Dependent Variable

The dependent variable for this study is a person's change in their beliefs. For this study this will be shown by asking the same question multiple times with the manipulation between measurements. The dependent variable as measured by the survey did include: changes in one's stance on abortion; changes on one's stance on the death penalty; changes on one's stance on the chicken and the egg question; and changes on one's stance on the view of our current president

Given the definition for changing your beliefs and subsequent components described above, these questions were asked to the subjects. First respondents were asked about their

stance on abortion. The question was close-ended; the answer choices were mutually exclusive and exhaustive. Respondents, in the first half of the survey, were given answer choices on a sliding scale with the poles being pro-life (0) and pro-choice (10) then on the second half of the survey they were given the same sliding scale with the same answers, pro-life (0) and pro-choice (10), on the poles. The second question respondents were about their opinion on the death penalty. Once again, the question was close-ended, and the answer choices were mutually exclusive and exhaustive. For this question respondents, in the first half of the survey, were given choices, again, on a sliding scale with the poles this time being a simple for (0) or against (10). In the second half of the survey respondents were given the same sliding scale with the same answers, for (0) and against (10), on the poles. For the third questions respondents were asked about their opinion on what came first the chicken or the egg. Similarly, to the first two questions this one was close-ended. The available answer choices, in the first half of the survey, for this question were also on a sliding scale with the poles being chicken (0) or egg (10). During the second half of the survey they were given the same sliding scale with the same answers, chicken (0) and egg (10), on the poles. The final question asked respondents their opinion of our current United States President. This question too was close ended. The answers, in the first half of the survey, were on a sliding scale with the poles being negative (0) and positive (10). In the second half of the survey respondents were given the same sliding scale with the same answers, negative (0) and positive (10), on the poles.

In measuring their changes of opinion, my goal is to determine not only if they do change their opinion but also the reason for the change. Asking these students, the same questions two separate times will be an effective way to measure this change. The first time the questions were asked in a way in which no outside pressure was placed into the wording of the question. After

completing the first half of the survey the respondents were asked demographic questions and other filler question. Once completed they moved onto the second half of the survey which will introduce gender influence into the questions.

Independent Variables

The manipulated independent variable measured by this study is exposure to gender group influence. Gender group influence is a very specific category and can thus be defined in a simple way. For this study gender, was defined as either men or women. While group was defined as an imagined percentage of OSU students who feel a certain way about a topic. Finally, influence in the context of this study was measured by whether a subject change their level of feeling or their response after seeing the gender manipulation. Thus, gender group influence can be defined as the power an imagined unisexual group of OSU students has on a subject.

Gender group influence was measured as whether the subject changed their initial response level to a question based on the majority opinion of a gendered group. The purpose of measuring the gender influence on the subject is to determine whether there is a correlation between the subject's changed second response and the gender of the group with whom they agreed.

In addition to manipulating the gender of the influencing group, the respondents sex was also measured. This enables me to discern whether there are same gender (homophily) processes driving any changes in opinions (McPherson, Smith-Lovin and Cook 2001), or whether there is a status process (Ridgeway 2009) whereby participants are predominantly influenced by male influencers.

Results

To analyze my data, I coded each of my variables, gave all of them numerical values, entered the data into an Excel spreadsheet, and then imported the spreadsheet into STATA. For nominal variables (race and gender) the codes began with zero, while ordinal, numerical, and categorical variables began with 1.

Of the OSU students that answered my survey, 21 were male and 38 were female. Two of the 61 respondents did not respond to this question. The sample was 71% white. The median age of the respondents was 20 years old with the mean and modal age of respondents being 19 years old. This demographic information shows that the common type of person to answer my survey was a white female who was roughly 19 years of age. The reason for this specific sample comes from the population from which I gathered respondents. By using OSU students, I limited my age range to roughly college age with no one under eighteen answering the survey and only one being older than twenty-three. While there was not much racial diversity in this survey it is still roughly representative of the racial breakdown of most college campuses. According to the Ohio State University Demographic report the school is primarily white with 66.36% of students affiliated this way and 8.29% African American, and11.98% Asian (USG Demographic Report). So, my survey does not match this exactly, but it is roughly like our colleges student racial population.

As previously established the dependent variable for my research is the level of change that occurs because of social influence. Change of opinions was measured along four dimensions. Average change in death penalty opinions was 0.16. Average change in chicken or the egg opinions was 0.08. Average change in abortion opinions was 0.28. Average change in presidential opinions was -0.05. When feedback about OSU opinions was framed in terms of male opinions, the average death penalty opinion was 5.17. When feedback about OSU opinions

was framed in terms of female opinions though, the average death penalty opinion was 4.5. When feedback about OSU opinions was framed in terms of male opinions, the average chicken or the egg opinion was 5.14. When feedback about OSU opinions was framed in terms of female opinions though, the average chicken or the egg opinion was 3.63. When feedback about OSU opinions was framed in terms of male opinions, the average abortion opinion was 7.66. When feedback about OSU opinions was framed in terms of female opinions though, the average abortion opinion was 6.83. When feedback about OSU opinions was framed in terms of male opinions, the average presidential opinion was 2.83. When feedback about OSU opinions was framed in terms of female opinions though, the average presidential opinion was 3.30.

For the initial or baseline questions there was only one missing answer but for the gender influenced questions there were two missing responses for each of the four questions. List-wise deletion was used to account for these missing values.

Of the four measures I used in my questionnaire to measure gender influence, none of the questions yielded significant results. Results, however, were trending in the predicted direction, indicating a lack of statistical power. All the measures that will be discussed in this section can be found in Appendix B. To measure the strength of gender influence on the subject a regression model was used. For this model the reference category was female manipulation of females and the group of most interest to this study is male manipulation of males. This category is most important because according to the national gang center, as of 2010, gangs are 92.6% male (National Gang Center) which means that males are primarily the members of gangs and terrorist organizations.

For the first variable, of being for or against the death penalty, the constant is 0.13, which means that females with a female manipulation increased their preferences for the death penalty

by .13. When comparing this coefficient to male manipulation of males it was determined that its coefficient was 0.5 greater than females on females. This means that when a man was presented with a male manipulation he was more likely to change his original answer in comparison to a female presented with female the female manipulation. By looking at other possible relationships presented in the regression model and seeing the level of influence the strongest influence is present when a male is presented with the male manipulation.

For the chicken or the egg, females with the female manipulation did not change their opinions (constant=0). Comparing this to males that were manipulated by males we saw an increase in the coefficient of 0.45. An increase here once again means that when a man was presented with male manipulation he was more likely to change his original answer in comparison to any of the other possible combinations. For the stance on abortion, females with the female manipulation did not change their opinions (constant 0). Comparing this to males that were manipulated by males we see an increase in the coefficient of 0.73. An increase here means that when a man was presented with male manipulation he was more likely to change his original answer in comparison to any of the other possible combinations. For views on the president, females with the female manipulation the constant is -0.13, which means that females with a female manipulation decreased their preferences for the death penalty by 0.13. Comparing this to males that were manipulated by males we saw an increase in the coefficient of 0.77. An increase here means that when a man was presented with male manipulation he was more likely to change his original answer in comparison to other possible combinations.

In the end, even though these relationships were not the strongest it shows that there is a connection between gender and decisions especially in the case of male manipulation of males. Even though my survey had weak statistical power these connections do support my hypothesis

that gender influences the beliefs or decisions of individuals. Even further it supports the idea that males join gangs or terrorist organizations because they are manipulated by the idea that the members of these organizations are also males.

Discussion

Unfortunately, my hypothesis was not supported because while I was able to show a connection between the variables it was not strong enough to show a significant correlation or relationship. The results, while weak, do show that gender can influence an individual's decisions or beliefs especially in the case of males influencing other males. It also showed that even divisive issues like abortion can be influenced by group pressure. In the experiment there was greater change in abortion opinions then there was in chicken or the egg opinions. Thus, showing that no matter the importance the issue has to a person their beliefs can be altered by the right amount of outside influence. This relates to the larger issue of gangs and terrorism because citizens who become extremists are not born hating their home country. Their home country is something very important to them and is one way in which they identify themselves, but a gang or terrorist organizations can make them abandon that belief and replace it with new beliefs. From my experiment this change is connected to the fact that gangs and terrorist organizations are comprised of males and recruiting males allows them to better influence the beliefs the new recruits have.

Even though my survey was trending toward a positive result the lack of statistical power does limit any conclusion that could be drawn. The lack of statistical power for my experiment comes from the small sample size that I collected, if my sample size was larger the results and experiment would have had more statistical power. Another issue with the survey was its to draw a wide racial or age diversity is a shortcoming of this experiment because while it is

representative of a college population it is not representative of the wider US population and more importantly might not be representative of those individuals who are most prone to joining a gang or terrorist organization. These issues are ones that must be addressed in future experiments to get stronger results.

Conclusion

The purpose of this research was to determine whether gendered groups can influence an individual to change their beliefs or decisions. To answer this a survey questionnaire with twenty-one total questions, but only seventeen were answered by each participant, was distributed online to students attending the Ohio State University, the results were then organized into data charts and analyzed. An analysis of the data revealed that the independent variable, group gender influence, was connected to changes in beliefs or decisions. However, this connection was not strong enough to be a significant correlation as the experimental method lacked statistical power.

The potential implications of these findings are important, though, because gang and terrorist recruitment are important issues and with more people joining these groups the threat is growing. Numerous studies have been conducted to show that one reason a person joins a gang or terrorist organization is to form attachments and relationships with people that they perceive as like them. The time of young adulthood is an important part of the life course because it is when you begin to become your own person and start making your own decisions in life. As someone trying to make their first choices they are highly susceptible to outside influences such as a large group that appears to be like them telling them what is right or wrong. Therefore, gangs and terrorist groups are so dangerous because they find youths at this point in their lives

and because of the pressure that the group exerts they convert people to their cause pushing them down the wrong path.

To gain statistical strength and validity, for the future, further research must be completed. Future research should use a sample that is more representative of vulnerable populations and is large enough to have sufficient statistical power. Since my results were trending in a positive way making these changes should only strengthen the relationships without causing new problems. In conclusion, my experiment was a good starting point for this topic of study, but more research is needed to support a causal relationship between gender influence and decision making. All this information will be helpful in determining the causes for joining a gang or terrorist organization and then allow others to intervene in this process so that fewer people will join these organizations.

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Appendix A: Survey Questionnaire

Q14 Dear Respondents,

My name is David Weinraub and I am fourth-year Criminology student at The Ohio State University. To graduate I am completing an Undergraduate Thesis project. I am conducting a survey to assess attitudes in college age students. By completing this survey, you will receive a $10 cash gift. The survey is completely confidential and voluntary, and you can end your participation at any time. As such please answer these questions as truthfully as possible.

Q19 Are you for or against the death penalty?

- ○ 0 (0)
- ○ 1 (1)
- ○ 2 (2)
- ○ 3 (3)
- ○ 4 (4)
- ○ 5 (5)
- ○ 6 (6)
- ○ 7 (7)
- ○ 8 (8)
- ○ 9 (9)
- ○ 10 (10)

Q23 What came first the chicken or the egg?

- 0 (0)
- 1 (1)
- 2 (2)
- 3 (3)
- 4 (4)
- 5 (5)
- 6 (6)
- 7 (7)
- 8 (8)
- 9 (9)
- 10 (10)

Q18 Are you pro-life or pro-choice?

- 0 (0)
- 1 (1)
- 2 (2)
- 3 (3)
- 4 (4)
- 5 (5)
- 6 (6)
- 7 (7)
- 8 (8)
- 9 (9)
- 10 (10)

Q24 Do you have a negative or positive view of our current President?

- ○ 0 (0)
- ○ 1 (1)
- ○ 2 (2)
- ○ 3 (3)
- ○ 4 (4)
- ○ 5 (5)
- ○ 6 (6)
- ○ 7 (7)
- ○ 8 (8)
- ○ 9 (9)
- ○ 10 (10)

Q25 Imagine a ladder with ten rungs. This ladder represents society and the people in it. The people at the top of the ladder possess the most valued income, education, jobs, and are the most respected. The people at the bottom of the ladder possess the least valued income, education, jobs, and are the least

respected. Compared to other people, on which rung would you place yourself? (1st rung (worst off) – 10th rung (best off))

- ○ 0 (0)
- ○ 1 (1)
- ○ 2 (2)
- ○ 3 (3)
- ○ 4 (4)
- ○ 5 (5)
- ○ 6 (6)
- ○ 7 (7)
- ○ 8 (8)
- ○ 9 (9)
- ○ 10 (10)

Q2 To which race/ethnicity do you most identify?

- ○ Caucasian (1)
- ○ African American (2)
- ○ Hispanic (3)
- ○ Latino (4)
- ○ Asian (5)
- ○ Native American (6)
- ○ Mixed Race (7)
- ○ Other (8)

Q3 Which religion do you associate yourself with?

- ○ Christian (1)
- ○ Muslim (2)
- ○ Jewish (3)
- ○ Catholic (4)
- ○ Buddhist (5)
- ○ Atheist (6)
- ○ Agnostic (7)
- ○ non-religious (8)
- ○ Other (please specify) (9) _____

Q4 How old are you?

- ○ Younger than 18 years old (please indicate exact age) (1)
  _____
- ○ 18 years old (2)
- ○ 19 years old (3)
- ○ 20 years old (4)
- ○ 21 years old (5)
- ○ 22 years old (6)
- ○ 23 years old (7)
- ○ Older than 23 years old (please indicate exact age) (8)
  _____

Q5 What is your current class rank?

- ○ Freshman (1)
- ○ Sophomore (2)
- ○ Junior (3)
- ○ Senior (4)
- ○ Graduate Student (5)
- ○ Not a Student (6)

End of Block: Introduction

Start of Block: Filler Questions

Q26 The next three questions are based on the following reading passage.

Reviving the practice of using elements of popular music in classical composition, an approach that had been in hibernation in the United States during the 1960s, composer Philip Glass (born 1937) embraced the ethos of popular music in his compositions. Glass based two symphonies on music by rock musicians David Bowie and Brian Eno, but the symphonies' sound is distinctively his. Popular elements do not appear out of place in Glass's classical music, which from its early days has shared certain harmonies and rhythms with rock music. Yet this use of popular elements has not made Glass a composer of popular music. His music is not a version of popular music packaged to attract classical listeners; it is high art for listeners steeped in rock rather than the classics.

Q27 The passage addresses which of the following issues related to Glass's use of popular elements in his classical compositions?

- ○ How it is regarded by listeners who prefer rock to the classics (1)
- ○ How it has affected the commercial success of Glass's music (2)
- ○ Whether it has contributed to a revival of interest among other composers in using popular elements in their compositions (3)
- ○ Whether it has had a detrimental effect on Glass's reputation as a composer of classical music (4)
- ○ Whether it has caused certain of Glass's works to be derivative in quality (5)

Q28 The passage suggests that Glass's work displays which of the following qualities?

- ○ A return to the use of popular music in classical compositions (1)
- ○ An attempt to elevate rock music to an artistic status more closely approximating that of classical music (2)
- ○ A long-standing tendency to incorporate elements from two apparently disparate musical styles (3)

Q29 Select the sentence that distinguishes two ways of integrating rock and classical music.

- ○ Popular elements do not appear out of place in Glass's classical music, which from its early days has shared certain harmonies and rhythms with rock music. (1)
- ○ His music is not a version of popular music packaged to attract classical listeners; it is high art for listeners steeped in rock rather than the classics. (2)
- ○ Reviving the practice of using elements of popular music in classical composition, an approach that had been in hibernation in the United States during the 1960s, composer Philip Glass (born 1937) embraced the ethos of popular music in his compositions. (3)

End of Block: Filler Questions

Start of Block: Gender

Q1 To which gender do you most identify?

- Male (1)
- Female (2)
- Transgender (3)
- Non-Conforming (4)
- Other (5)

End of Block: Gender

Start of Block: Random Test 1

Q30 After surveying OSU students it was determined that 78% of female students are for the death penalty. Are you for or against the death penalty?

- 0 (0)
- 1 (1)
- 2 (2)
- 3 (3)
- 4 (4)
- 5 (5)
- 6 (6)
- 7 (7)
- 8 (8)
- 9 (9)
- 10 (10)

Q31 After surveying OSU students it was determined that 86% of female students believe that the egg came before the chicken. What came first the chicken or the egg?

- 0 (0)
- 1 (1)
- 2 (2)
- 3 (3)
- 4 (4)
- 5 (5)
- 6 (6)
- 7 (7)
- 8 (8)
- 9 (9)
- 10 (10)

Q32 After surveying OSU students it was determined that 84% of female students are pro-life. Are you pro-choice or pro-life?

- ○ 0 (0)
- ○ 1 (1)
- ○ 2 (2)
- ○ 3 (3)
- ○ 4 (4)
- ○ 5 (5)
- ○ 6 (6)
- ○ 7 (7)
- ○ 8 (8)
- ○ 9 (9)
- ○ 10 (10)

Q33 After surveying OSU students it was determined that 72% of female students have a positive view of our current US President. Do you have a negative of positive view of our President?

- ○ 0 (0)
- ○ 1 (1)
- ○ 2 (2)
- ○ 3 (3)
- ○ 4 (4)
- ○ 5 (5)
- ○ 6 (6)
- ○ 7 (7)
- ○ 8 (8)
- ○ 9 (9)
- ○ 10 (10)

End of Block: Random Test 1

Start of Block: Random Test 2

Q34 After surveying OSU students it was determined that 78% of male students are for the death penalty. Are you for or against the death penalty.

- 0 (0)
- 1 (1)
- 2 (2)
- 3 (3)
- 4 (4)
- 5 (5)
- 6 (6)
- 7 (7)
- 8 (8)
- 9 (9)
- 10 (10)

Q35 After survey OSU students it was determined that 86% of male students believe that the egg came before the chicken. What came first the chicken or the egg?

- 0 (0)
- 1 (1)
- 2 (2)
- 3 (3)
- 4 (4)
- 5 (5)
- 6 (6)
- 7 (7)
- 8 (8)
- 9 (9)
- 10 (10)

Q36 After survey OSU students it was determined that 84% of male students are pro-life. Are you pro-choice or pro-life?

- 0 (0)
- 1 (1)
- 2 (2)
- 3 (3)
- 4 (4)
- 5 (5)
- 6 (6)
- 7 (7)
- 8 (8)
- 9 (9)
- 10 (10)

Q37 After surveying OSU students it was determined that 72% of male students have a positive view of our current US President. Do you have a negative of positive view of our President?

- ○ 0 (0)
- ○ 1 (1)
- ○ 2 (2)
- ○ 3 (3)
- ○ 4 (4)
- ○ 5 (5)
- ○ 6 (6)
- ○ 7 (7)
- ○ 8 (8)
- ○ 9 (9)
- ○ 10 (10)

End of Block: Random Test 2

Start of Block: Ending

Q17 Thank you for taking the time to truthfully respond to the survey. To collect the $10 please come to Townshend Hall Rm 160 on Tuesday March 20th from 1:00-2:00 or Thursday March 22 from 1:00-2:00. Your time and participation is greatly appreciated.

Appendix B: Data Tables

Table 1: Race

Race Identification	Frequency	Percent
Caucasian	47	77.05
African American	2	3.28
Hispanic	3	4.92
Latino	1	1.64
Asian	6	9.84
Native American	0	0
Mixed Race	1	1.64
Other	1	1.64

Table 2: Gender

Gender Identification	Frequency	Percent
Female	38	64.41
Male	21	35.59

Table 3: Age

Younger than 18	0	0
18 years old	7	11.48
19 years old	23	37.7
20 years old	12	19.67
21 yearas old	6	9.84
22 years old	11	18.03
23 years old	1	1.64

Table 4: Summary Statistics for Baseline, Gender Manipulation, and Average Change

Outcome	Baseline	Female Manipulation	Male Manipulation	Total Change
Death Penalty	4.84 3.01	4.5 3.14	5.17 3.06	0.16 1.4
Chicken or Egg	4.38 3.19	3.63 2.86	5.14 3.36	0.08 1.61
Abortion	7.28 3.35	6.83 3.69	7.66 2.78	0.28 1.13
Support Trump	2.92 2.76	3.3 2.68	2.83 2.95	-0.05 1.31

Table 5: Summary of OLS regressions of change scores

	Death Penalty	Chicken or Egg	Abortion	Support Trump
Female w/ Male Manip[1]	0.45 0.54	-0.33 0.63	0.5 0.43	-0.2 0.5
Male w/Female Manip[1]	-0.39 0.46	0.17 0.54	0.13 0.37	-0.04 0.43
Male w/Male Manip[1]	0.5 0.55	0.45 0.65	0.73 0.44	0.77 0.52
Constant	0.13 0.36	0 0.42	0 0.03	-0.13 0.34

***Note*: [1]Reference category is female w/Female manip. *N* = 61.**